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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2009*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-10,12-15,17-20,31,32,40 and 41* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-4,6-10,12-15,17-20,31,32,40 and 41* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *3/5/09*.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a **NON-FINAL** Office Action on the merits in response to communications filed

on January 27, 2009. Currently, claims 1-4, 6-10, 12-15, 17-20, 31-32, and 40-41 are pending.

Claims 42-50 have been withdrawn due to election by original presentation.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on January 27, 2009 has been entered.

Response to Arguments

Applicant's arguments filed on January 27, 2009 have been fully considered but they are

not persuasive. Applicant argues the following:

(A)   Claim 31 is in proper dependent form under the infringement test. (see Remarks,

   page 13).

(B)   Claim 12 is directed to patentable subject matter. (see Remarks, page 14).

(C)   Burok does not teach or suggest placing a non-business time delay in a queue. (see

   Remarks, page 18).

Applicant's arguments will now be addressed in turn:

(A) Claim 31 is in proper dependent form under the infringement test.

Regarding argument (A), Examiner respectfully disagrees. Claim 31 fails the

infringement test because a medium containing computer-executable instructions for carrying out

the method of claim 1 would infringe claim 31, but would not infringe claim 1 unless the method

is completely carried out. Claim 31 does not require the method of claim 1 to be completely

carried out. Applicant's examples are inapposite because the claims at issue are not product-by-

process claims.

(B) Claim 12 is directed to patentable subject matter.

Regarding argument (B), Examiner respectfully disagrees. Claim 12 does not positively

recite any elements that necessarily constitute a system or apparatus (i.e. computer hardware).

Rather than positively reciting a computer, the claim recites a scheduler *operable, by a computer*.

A scheduler operable by a computer could be software. Because the software is positively

recited, rather than the computer, the claim is not patentable under § 101. Software per se is not

patent-eligible subject matter.

Applicant's argument that claim 12 is directed to a physical transformation is not

applicable in this case because the machine-or-transformation test applies only to claimed

processes. *In re Bilski*, 545 F.3d 943, 956 (Fed. Cir. 2008). Furthermore, applicant's argument

regarding a useful, concrete, and tangible result is not applicable because this is no longer the

standard for determining patent-eligible subject matter under § 101. *Id.*

(C) Burok does not teach or suggest placing a non-business time delay in a queue.

Regarding argument (C), Examiner respectfully disagrees. Burok teaches the claimed limitation. Burok teaches a queue of activities in a workflow. (see ¶ 20: "An automated workflow method to assign resources to a plurality of work items"; "The workflow includes work activities to be completed in an assigned order and within the commitment"). Burok also teaches a non-business time period that is ignored in determining at least one of a service time and a time remaining in queue for a work item. In paragraph 57, Burok differentiates business time from non-business time: "When the enterprise performing the work activity is not typically a 24/7 operation, the time may refer to business days based on the operating hours of the business." Also, "If the enterprise operates between the hours of 8 am and 5 pm without overtime, 4.5 days would translate to 40.5 hours to complete the work activity." One of ordinary skill in the art would recognize that 4.5 days corresponds to 108 real time hours. By translating 4.5 days into 40.5 hours rather than 108 hours, Burok inherently teaches inserting a delay into the queue to ignore the difference between real time hours and business time hours. Burok's teaching is the same as that taught in Applicant's specification. (see page 10: "The service time may be, for example, one business day. One business day for the resources in service A may be eight business hours"; see also example on page 11 of specification). Thus, the claimed limitation is inherent (or at least obvious) in view of Burok.

Finally, Examiner notes that Applicant has not properly traversed any of Examiner's takings of Official Notice. To adequately traverse a fact that has been Officially Noticed, "an applicant must specifically point out the supposed errors in the examiner's action, **which would include stating why the noticed fact is not considered to be common knowledge or well-**

known in the art." (emphasis added). See MPEP § 2144.03 (C). Applicant has not provided

any evidence that the Officially Noticed facts are not common knowledge or well-known in the

art.

Applicant's arguments not addressed above are moot in view of the new grounds of

rejection, set forth below.

Response to Amendment

Applicant has added claims 42-50 to the application. These claims are directed to an

invention that is independent or distinct from the originally claimed invention. Thus, they have

been withdrawn from consideration. See the Election/Restriction section, below.

Applicant has amended the specification. This amendment will not be entered because it

introduces new matter. See the Specification section, below.

Applicant's cancellation of claims 11 and 16 renders moot the objection to these claims

set forth in the previous Office Action, as well as their rejection under § 112. Accordingly, these

objections and rejections have been withdrawn.

The remaining objections and rejections of the present claims can be found below.

Election/Restrictions

Newly submitted claims 42-50 are directed to an invention that is independent or

distinct from the invention originally claimed for the following reasons:

The originally-filed invention and the newly-filed invention (claims 42-50) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, the inventions are separately usable for at least the reason that the newly filed subcombination (claims 42-50) has separate utility such as determining a first index to a conversion table, mapping the first index to provide a second index, and converting the second index into a corresponding second time. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different

classification;

(b) the inventions have acquired a separate status in the art due to their recognized

divergent subject matter;

(c) the inventions require a different field of search (for example, searching different

classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another

invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101

and/or 35 U.S.C. 112, first paragraph.

Should applicant traverse on the ground that the inventions are not patentably distinct,

applicant should submit evidence or identify such evidence now of record showing the

inventions to be obvious variants or clearly admit on the record that this is the case. In either

instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence

or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Since applicant has received an action on the merits for the originally presented

invention, this invention has been constructively elected by original presentation for prosecution

on the merits. Accordingly, claims 42-50 are withdrawn from consideration as being directed to

a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

The amendment filed on January 27, 2009 is objected to under 35 U.S.C. 132(a) because

it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall

introduce new matter into the disclosure of the invention. The added material which is not

supported by the original disclosure is at least as follows: "As used herein, 'real time' refers to a service time determined without respect to business and non-business time periods while 'business time' refers to a service time determined with respect to business and non-business time periods." Applicant has introduced an explicit definition for terms not defined in the original specification.

The amendment beginning at page 11, line 9, which corrects a typographical error by introducing the word "of" is accepted. The remainder of Applicant's arguments are believed to have introduced new matter. If Applicant would like these amendments entered, Applicant should clearly point out how the amendments are supported by the original specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

Claim 31 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 31: Claim 31 is directed to computer-readable mediums having computer-executable instructions for performing the steps of claim 1. This claim is improper because it fails the "infringement test" (see MPEP 608.01(n), Section III). Applying the infringement test, what is needed to infringe claim 31 is, for example a CD-ROM having computer executable code that if and when executed would cause a computer to do the steps recited in claim 1. However, such a CD-ROM would not infringe the method steps of claim 1 since the CD-ROM itself never

performs any of the active steps required by the method of claim 1. In other words, mere

possession of such a CD-ROM would infringe claim 31, but would not infringe claim 1. Thus,

claim 31 is an improper dependent claim.

Claim 31 fails the infringement test because a medium containing computer-executable

instructions for carrying out the method of claim 1 would infringe claim 31, but would not

infringe claim 1 unless the method is completely carried out. Claim 31 does not require the

method of claim 1 to be completely carried out. Applicant's examples are inapposite because the

claims at issue are not product-by-process claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claims 12-15, 17-20 and 41 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

<u>Claim 12</u>: Claim 12 is directed toward a system. However, the claim does not positively

recite any elements that necessarily constitute a system or apparatus (i.e. computer hardware).

Rather than positively reciting a computer, the claim recites a scheduler *operable, by a computer*.

A scheduler operable by a computer could be software. Because the software is positively

recited, rather than the computer, the claim is not patentable under § 101. Software per se is not

patent-eligible subject matter.

Claims 13-15, 17-20 and 41: Dependent claims 13-20 and 41 are rejected for failing to

remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

Claims 9-10, 14-15, and 40-41 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably convey

to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Claim 9: There does not appear to be support for the "converting" and "thereafter

determining" steps of claim 9. The method described on page 6 of the originally-filed

specification does not appear to support these limitations. The steps in the original specification

are "indexing the calendar into a table having a real time index" and "computing the service

times into a time interval according to the table." This disclosure does not support the claimed

limitations of "converting each of the service times into an equivalent real time index" and

"determining, for each of the real time indices, a corresponding business time interval."

Applicant has not pointed out where the previously amended claim is supported, nor does there

appear to be a written description of the claim limitations in the application as originally filed.

Claim 10: There does not appear to be support for the "taking the modulus" and "converting" steps of claim 10. The method described on page 6 of the originally-filed specification does not appear to support these limitations. The steps in the original specification are "taking the modulus of the calendar time by the minimum time interval." This does not support the claimed limitation of "taking the modulus of the relative real time by the minimum time interval to output a corresponding real time index; and converting the real time index into a corresponding business time index." Applicant has not pointed out where the previously amended claim is supported, nor does there appear to be a written description of the claim limitations in the application as originally filed.

Claims 14-15: Claims 14 and 15 are substantially similar to claims 9 and 10, respectively, and are rejected under similar rationale.

Claims 40-41: There does not appear to be support for any of the claim limitations of claims 40 and 41 in the specification as originally filed. Rather, the support for these claims arises in the amendments to the specification filed by the Applicant. These amendments have not been entered because they introduce new matter (see Specification section, above). Applicant has not pointed out where the previously amended claims are supported, nor does there appear to be a written description of the claim limitations in the application as originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

Claims 9-10, 12-15, 17-20, and 40-41 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Claim 9: Claim 9 recites the limitation "converting each of the service times into an

equivalent real time index." It is not clear what this limitation means. Service times are already

expressed in real time (e.g. 3 minutes, 24 hours, etc.). As such, it is not clear what is being done

in the conversion step as it appears that no conversion is actually taking place. For examination

purposes, this limitation will be ignored because service times are already expressed in real time.

Claim 10: Claim 10 refers back to "said indexing step" of claim 9. However, Applicant's

amendment has cancelled the indexing step of claim 9. Thus, there is no antecedent basis for this

limitation.

Furthermore, one of ordinary skill in the art would not understand what is meant by the

limitations of claim 10. For example, what is the minimum time interval selected for? What is a

calendar start time? When does a calendar "start?" Does this refer to the start of a day, the start

of a work period, or the start of the "calendar" in general? How is a real time "subtracted from" a

calendar start time? Claim 10 requires significant clarification in order for one of ordinary skill

in the art to understand the claim limitations.

Because claim 10 is so indefinite, no art rejection is warranted as substantial guesswork

would be involved in determining the scope and content of these claims. *See in re Steele*, 305

F.2d 859, 134 USPQ 292 (CCPA 1962); *Ex parte Brummer*, 12 USPQ 2d, 1653, 1655 (BPAI

1989); *see also in re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Prior art pertinent to

the disclosed invention is nevertheless cited and applicants are reminded they must consider all

cited art under Rule 111(c) when amending the claims to conform with 35 U.S.C. 112.

Claim 12: Claim 12 recites a "system" comprising "a plurality of human agents." It is

not clear how human agents are a "system." Clarification is required.

Claims 14-15: Claims 14 and 15 are substantially similar to claims 9 and 10 and are

rejected under similar rationale. Art has not been applied to claim 15 for the same reasons it has

not been applied to claim 10.

Claim 40: Claim 40 recites "determining... a real time index into a real time-to-business

time conversion table." This limitation does not make sense. How is an index "determined into"

a conversion table? It is not clear what is occurring in claim 40. Further, it is not clear that

claim 40 has support in the originally-filed specification. Because claim 41 is so indefinite, no

art rejection is warranted as substantial guesswork would be involved in determining the scope

and content of these claims. *See in re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962); *Ex

parte Brummer*, 12 USPQ 2d, 1653, 1655 (BPAI 1989); *see also in re Wilson*, 424 F.2d 1382,

165 USPQ 494 (CCPA 1970). Prior art pertinent to the disclosed invention is nevertheless cited

and applicants are reminded they must consider all cited art under Rule 111(c) when amending

the claims to conform with 35 U.S.C. 112.

Claim 41: Claim 41 is substantially similar to claim 40 and is rejected under similar

rationale. Art has not been applied to claim 41 for the same reasons it has not been applied to

claim 40.

Claims 13-15, 17-20 and 41: Dependent claims 13-20 and 41 are rejected for failing to

remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by

Burok (US 2003/0152212).

Claim 1: Burok discloses a method of allocating resources, comprising:

- providing a resource allocation system comprising (i) at least one queue of work

   items, each of the work items having an associated service time (see ¶¶ 20 and

   46), and (ii) at least one resource to service the work items in the at least one

   queue (see figures 7 and 10; abstract; ¶ 45);

- a non-business time period that is ignored in determining at least one of a service

   time and a time remaining in the at least one queue for work items positioned at

> queue positions farther from a head of the at least one queue (see ¶ 57, disclosing

> that a time of 45 days should be converted to working hours instead of days);

- based on at least one of a service time and remaining time, allocating, by a computer, resources associated with said at least one queue to service work items according to predetermined algorithms (see ¶ 47).

Although Burok does not explicitly disclose placing a time delay in a queue, this feature is inherent in Burok. In paragraph 57, Burok differentiates business time from non-business time: "When the enterprise performing the work activity is not typically a 24/7 operation, the time may refer to business days based on the operating hours of the business." Also, "If the enterprise operates between the hours of 8 am and 5 pm without overtime, 4.5 days would translate to 40.5 hours to complete the work activity." By translating 4.5 days into 40.5 hours rather than 108 hours in queue, Burok inherently teaches inserting a delay into the queue to ignore the difference between real time hours and business time hours. Burok's teaching is the same as that taught in Applicant's specification. (see page 10: "The service time may be, for example, one business day. One business day for the resources in service A may be eight business hours"; see also example on page 11 of specification). Thus, the claimed limitation is inherent in Burok.

Claim 2: Burok discloses wherein said placing step comprises:

- accessing a calendar associated with at least one queue, said calendar including entries corresponding to business time and non-business time (see ¶ 57, disclosing a schedule based on the operating hours of a business);

- determining when a non-business time period begins (see id., disclosing a

    business that operates between the hours of 8 am and 5 pm; thus, the non-business

    time period begins at 5 pm).

Although Burok does not explicitly disclose placing a duration of said non-business time

period in a selected position in a queue, this feature is inherent in Burok. See the rejection of

claim 1, above, for the accompanying rationale for inherency.

Claim 6: Burok discloses wherein said at least one queue includes a plurality of queues

of work items (see ¶ 53, disclosing a third workflows made up of a first and second workflow),

each of said plurality of queues having an associated calendar indicating business time and non-

business time periods (see ¶ 57).

Claim 7: Burok discloses wherein said predetermined algorithms perform resource

allocation independently of the calendar associated with the queues (see ¶ 47).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-2 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Burok (US 2003/0152212).

It is Examiner's position that the features of claims 1 and 2 are either explicitly disclosed or inherent in Burok. Alternatively, if the features are not inherent, they are obvious for the reasons explained below. A 35 U.S.C. 102/103 rejection is appropriate when the prior art seems to be identical except that the prior art is silent as to an inherent characteristic. See MPEP 2112(III).

Claim 1: Burok discloses a method of allocating resources, comprising:

- providing a resource allocation system comprising (i) at least one queue of work items, each of the work items having an associated service time (see ¶¶ 20 and 46), and (ii) at least one resource to service the work items in the at least one queue (see figures 7 and 10; abstract; ¶ 45);

- a non-business time period that is ignored in determining at least one of a service time and a time remaining in the at least one queue for work items positioned at queue positions farther from a head of the at least one queue (see ¶ 57, disclosing that a time of 45 days should be converted to working hours instead of days);

- based on at least one of a service time and remaining time, allocating, by a computer, resources associated with said at least one queue to service work items according to predetermined algorithms (see ¶ 47).

Although Burok does not explicitly disclose placing a time delay in a queue, this limitation is obvious. For example, Burok suggests that if an item is due in one business day (e.g. a phone call at 4 p.m. on Monday is due at 4 p.m. on Tuesday), that item should be expressed as being due in 8 working hours. Thus, there would be a delay from 5 p.m. on Monday until 9 a.m. on Tuesday where the working hours would not be counted toward the

service time or remaining time in the commitment. Examiner takes Official Notice that it was
well-known in the art at the time the invention was made to use delays to push items in a queue
back in time. An example of this is a "dummy" task that is inserted into a workflow. It would
have been obvious to one of ordinary skill in the art at the time the invention was made to use a
delay to push Burok's tasks back in time to account for Burok's non-business time. One of
ordinary skill in the art would have been motivated to do so for the benefit of a more accurate
prediction of when a task will be completed.

Claim 2: Burok discloses wherein said placing step comprises:

- accessing a calendar associated with at least one queue, said calendar including
  entries corresponding to business time and non-business time (see ¶ 57, disclosing
  a schedule based on the operating hours of a business);

- determining when a non-business time period begins (see id., disclosing a
  business that operates between the hours of 8 am and 5 pm; thus, the non-business
  time period begins at 5 pm).

Burok does not explicitly disclose placing a duration of said non-business time period in
a selected position in said at least one queue to indicate when said non-business time begins.
However, a similar limitation was rejected in claim 1. See the rejection of claim 1, above, for the
accompanying rationale.

Claim 6: Burok discloses wherein said at least one queue includes a plurality of queues
of work items (see ¶ 53, disclosing a third workflows made up of a first and second workflow),

each of said plurality of queues having an associated calendar indicating business time and non-

business time periods (see ¶ 57).

Claim 7: Burok discloses wherein said predetermined algorithms perform resource

allocation independently of the calendar associated with the queues (see ¶ 47).

Claim 8: Burok discloses displaying, at a user interface, a resource status associated with

a first queue of said plurality of queues (see figure 8, "Resources Available"). Burok does not

explicitly disclose displaying a real time clock. However, Examiner takes Official Notice that it

was well-known in the art at the time the invention was made to display a real time clock on a

user interface (e.g. Microsoft Windows start menu has a real time clock). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to display a real

time clock and a resource status on the same display. This combination of known elements

retains the functionality of the separate elements and produces a result that would be predictable

to one of ordinary skill in the art.

Claim 9: Burok discloses:

- determining service times for work items in said first queue (see ¶¶ 20 and 46);

- selecting a calendar associated with said first queue (see ¶ 57, disclosing

  operating hours of a business associated with a queue);

- converting each of the service times into an equivalent real time index (see ¶¶ 20,

  46, and 57); and

- thereafter determining, for each of the real time indices, a corresponding business time interval (see ¶ 57, disclosing that 4.5 days of real time is equivalent to 40.5 working hours).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burok in view of Applicant's admitted prior art.

Claims 3-4: Burok does not explicitly disclose wherein said selected position is at the head or tail of said at least one queue. Examiner takes Official Notice that it was well-known in the art at the time the invention was made to use delays whenever they will actually occur. For example, claim 2 recites that the non-business time is placed in a position in the queue that indicates when the non-business time begins. Therefore, if the non-business time were to occur at the head of the queue, it would be placed at the head, and likewise for the tail. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the delay wherever it actually occurs for the benefit of an accurate representation of when the non-business time actually occurs.

Burok also does not explicitly disclose wherein said at least one queue is a delta queue. Applicant admits that delta queues are known in the art. (see originally-filed Specification: page 12: line 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to express the commitment times of Burok in a delta queue. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by using delta queues.

Furthermore, Examiner takes Official Notice of the use of pointers, timeouts, queue

values, and time differences in delta queues (e.g. see attached references Gupta: figures 9-10, and

Rayner: figures 4-5). It would have been obvious to one of ordinary skill in the art at the time

the invention was made to include these features in a delta queue (in fact, some of the limitations

merely describe what a delta queue is). This combination of known elements retains the

functionality of the separate elements and produces a result that would be predictable to one of

ordinary skill in the art.

Claims 12-14, 17-20, 31, and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Burok in view of Nourbakhsh (US 7,478,051).

Claim 12: Burok discloses a resource allocation system, comprising:

- a plurality of human agents (see ¶ 22, disclosing agents; ¶¶ 47, 55, and 60);

- a plurality of queues for holding work items to be serviced by the plurality of

  human agents (see ¶ 53, disclosing multiple workflows);

- a scheduler operable, by a computer, to receive the work items, determine at least

  one of a service time and time remaining in queue for said work items (see ¶¶ 46,

  51, and 57), place said work items into a selected queue of the plurality of queues

  (see ¶ 53), and allocate human agents to service work items in the plurality of

  queues according to predetermined agent allocation algorithms (see ¶ 20,

  disclosing assigned orders and commitments; ¶¶ 5 and 15, disclosing goals; ¶¶ 62,

  73, 88, 97-98, and 110-111);

- a timer operable to track that at least one of a service time and time remaining in queue in said plurality of queues (see ¶ 59, disclosing a timer);

- wherein said scheduler is operable, by the computer, to monitor each of said calendars and, upon the start of a non-business time for a selected calendar, place a time delay corresponding to the length of said non-business time in to the queue associated with the selected calendar, whereby the non-business-time period is ignored in determining the at least one of a service time and time remaining in queue for at least some of the work items in the queue associated with the selected calendar (see ¶ 57; see also the discussion on inherency and obviousness of this limitation in the § 102 and § 103 rejections of claim 1, above).

Burok further discloses calendars having entries corresponding to business time and non-business time (see ¶ 57). Burok does not explicitly disclose a plurality of electronic calendars corresponding to said plurality of queues, wherein each queue has an associated calendar. Nourbakhsh discloses this limitation (see column 1: lines 44-46, disclosing different queues based on content; column 6: lines 9-20, disclosing staffing hours on a per-queue basis; column 8: lines 51-65; column 12: lines 24-33, disclosing staffing the various queues with employee profiles; column 10: lines 1-15, explaining that employee profiles include availability, vacation, breaks, training, absenteeism, jury duty, etc.; column 12: lines 34-40, disclosing a proposed schedule for servicing a queue; column 13: lines 49-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the concept of calendars taught by Burok and apply the calednars to multiple queues as taught by Nourbakhsh. One of ordinary

skill in the art would have been motivated to do so for the benefit of more accurate schedules for each individual queue.

Claims 13-14: Claims 13-14 are substantially similar to claims 8-9 and are rejected under similar rationale.

Claims 17-19: Claims 17-19 are substantially similar to claims 2-4 and are rejected under similar rationale.

Claim 20: Claim 20 is substantially similar to claim 7 and is rejected under similar rationale.

Claim 31: Burok discloses a computer readable medium comprising computer executable instructions (see Burok: claim 26).

Claim 32: Burok does not explicitly disclose wherein the time delay stops a clock associated with the at least on queue for the duration of the time delay. Examiner takes Official Notice that it was well-known in the art at the time the invention was made to stop clocks for time delays (e.g. in sports contests). It would have been obvious to one of ordinary skill in the art at the time the invention was made to stop a clock for an associated time delay in the queues of Burok. One of ordinary skill in the art would have been motivated to do so for the benefit of keeping accurate time.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Gupta et al (US 5,941,983), directed to determining stall values in queues.

- Rayner (US 6,097,885), directed to a digital simulation system including delta queues.

- Taneja et al (US 2003/0198204), directed to resource allocation in a communication system having quality of service requirements.

- Kappler et al (US 7,372,857), directed to scheduling tasks, including queues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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